

Dec 12

Work Order ID 76531

\*76531\*

PRELIMINARY ISSUE

Page 1

Item ID: D4410-1

Accept

\*N9000040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Co-Pilot Collective Head

Start Date: 16/11/2011 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 30/11/2011 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals:

Process Plan: M.C.J.

Date: 11/11/11

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D4410

A

100

Cut blanks as per folio

0.00

\*100\*

Bandsaw

Memo

0.00

Jeaspa Bandsaw

CUT BLANK AT 5.00"

110

0.00

\*110\*

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

MACHINE AS PER DWG &amp; FOLIO FB078

FOLIO REV: A

DWG REV: A

DEBURR

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 76531

November-16-11 12:39:21 PM

**\*76531\***

Page 2

Item ID: D4410-1 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Co-Pilot Collective Head  
 Start Date: 16/11/2011 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 30/11/2011 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120	QC2- Inspect parts off machine FAI/FAIB	0.00							
<b>*120*</b>									
QC	Memo	0.00		11/12/13		2	0		
Quality Control				11/12/13					

130	QC8- Inspect parts - second check	0.00							
<b>*130*</b>									
QC	Memo	0.00		11/12/23		2	0		
Quality Control									

140	Identify as per dwg & Stock Location: <u>139F</u>	0.00							
<b>*140*</b>									
Packaging	Memo	0.00							
Packaging									

Qty of 1 used for HAI  
 11-12-12

11/12/23  
 11/12/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**\*76531\***

November-16-11 12:39:21 PM

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 16/11/2011    **Start Qty:** 1.00    **\*1\***

**Cust Item ID:**

**Required Date:** 30/11/2011      **Req'd Qty:** 1.00      **\* 1 \***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

### Operation Description

### Set Up/ Run Hours

**Tool ID**

Tool #

## Plan Code

**Accept  
Qty**

Reject  
QtyReject  
Number

**Insp.  
Stamp**

150

QC21- Final Inspection - Work Order Release

0.00

**\*150\***

QC

## Memo

0.00

## Quality Control

ISSUE PO 15759

BF 11-12-29  
①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

November-16-11 12:39:24 PM

Page 1

Work Order ID: 76531

**\*76531\***

Parent Item: D4410-1

**\*D4410-1\***

Parent Item Name: Co-Pilot Collective Head

Start Date: 16/11/2011

Required Date: 30/11/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A NEW ISSUE 11/11/16 JFS VERIFY BY:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B4.500X4.500		Purchased	No			100	f	12.0000	0.42	0.442105			

**\*M6061T6B4 500X4 500\***

**\*\***

6061-T6 AluminumBar 4.500" X 4.500"

Location

Loc Qty

Loc Code

MAT

12

119581

12

.442 *FK* 11/12/07  
.442 *EL* 11/12/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

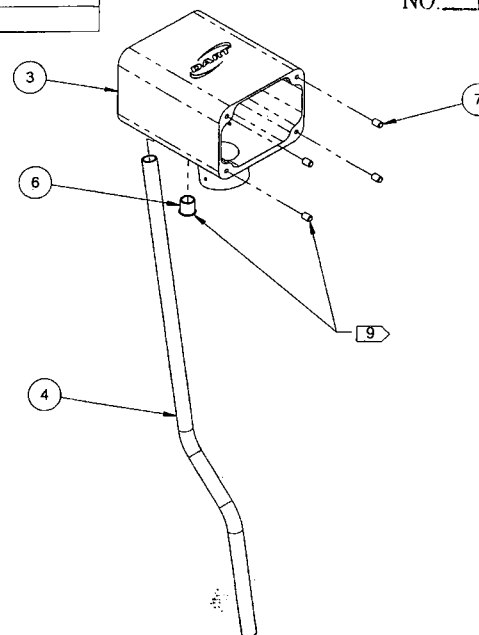
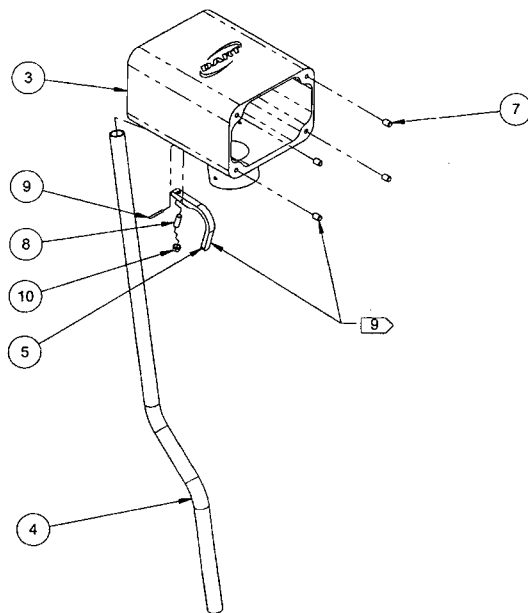
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

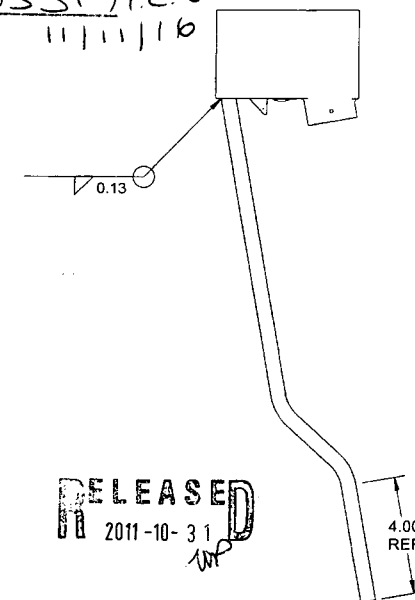
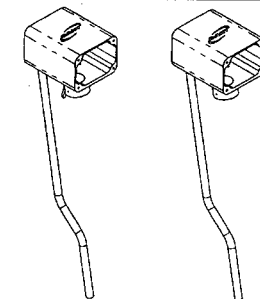
**NOTE:** Date & initial all entries



ITEM NO.	QTY. -041	QTY. -043	PART NUMBER	DESCRIPTION
1	X		D4410-041	CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)
2		X	D4410-043	CO-PILOT COLLECTIVE HEAD ASSEMBLY (212)
3	1	1	D4410-1	CO-PILOT COLLECTIVE HEAD
4	1	1	D4410-7	CONDUIT
5	1		D4410-9	TRIGGER
6		1	D4413-1	DOME PLUG
7	4	4	90296A108	HELI-COIL INSERT (6-32 X 0.276)
8	1		AN565F8H7	SETSCREW
9	1		MS20253-1-65	PIN
10	1		MS21042L08	NUT



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 76531 M.C.J  
1111116



**D4410-043 WELDING DETAIL  
(-043 SHOWN, -041 SIMILAR)**

**D4410-041 CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)**

**D4410-043 CO-PILOT COLLECTIVE HEAD ASSEMBLY (212)**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.64 lbs
- 8) WELDING: PER DART QSI 004.
- 9) INSTALL AFTER ANODIZING

A	NEW ISSUE	DC	11.06.06
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>JC</i>	<b>DART AEROSPACE USA, INC.</b> KENT, WA	
DRAWN	<i>JC</i>		
CHECKED	<i>JS</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>JS</i>	D4410	SHEET 1 OF 7
APPROVED	<i>JS</i>	TITLE	SCALE
DE APPR.	<i>JS</i>	CO-PILOT COLLECTIVE HEAD	NTS
DATE	11.06.06	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

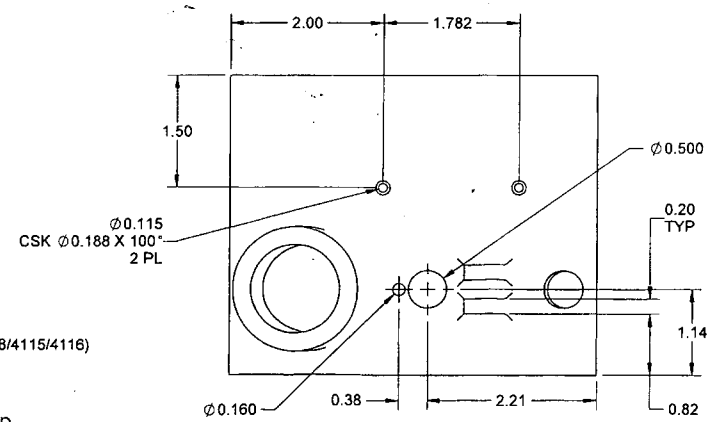
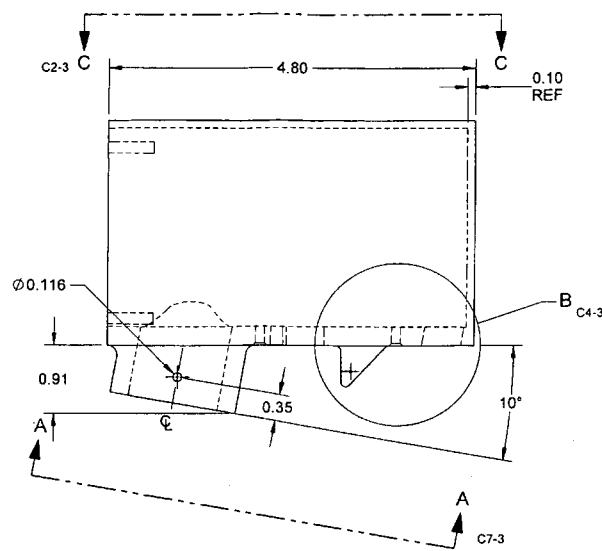
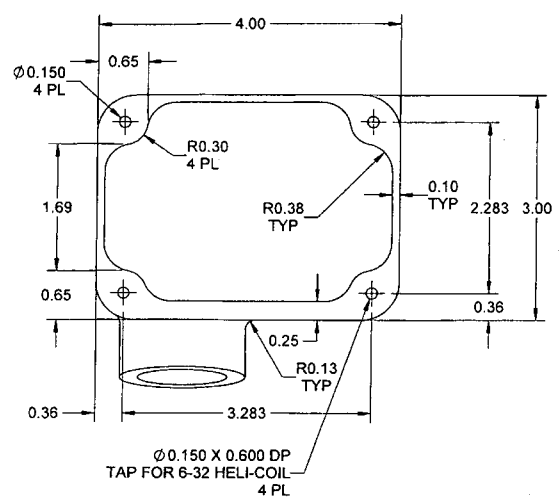
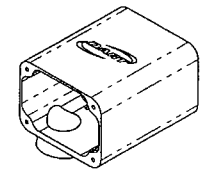
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

76531



- NOTES:
- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR  
QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221  
REF. DART SPEC. M6061T6B4.000X3.000
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
  - 7) WEIGHT: 1.50 lbs

**D4410-1 CO-PILOT COLLECTIVE HEAD**

RELEASED  
2011-11-31  
ND

DESIGN	PC	DART AEROSPACE USA, INC.	
DRAWN	PC	KENT, WA	
CHECKED	PC	DRAWING NO.	REV. A
MFG APPR.	PC	D4410	SHEET 2 OF 7
APPROVED	PC	TITLE	SCALE
DE APPR.	PC	CO-PILOT COLLECTIVE HEAD	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

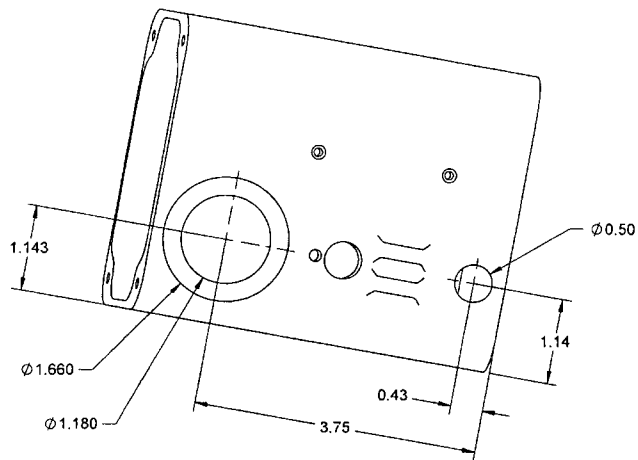
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

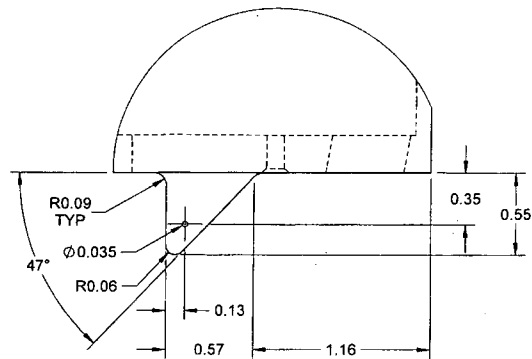
**NOTE:** Date & initial all entries

76531



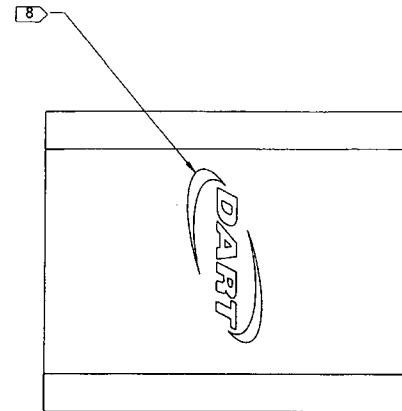
**VIEW A-A**  
**SCALE 1X**

C5-2



**DETAIL B**  
**SCALE 2X**

C4-2



**VIEW C-C**  
**SCALE 1X**

D4-2

**D4410-1 CO-PILOT COLLECTIVE HEAD**  
**DETAIL VIEWS**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) ENGRAVE "DART" LOGO AS SHOWN 0.003 - 0.005 DP.

RELEASED  
2011-10-31

DESIGN	DC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	DC	KENT, WA	
CHECKED	AS	DRAWING NO.	REV. A
MFG. APPR.	21	D4410	SHEET 3 OF 7
APPROVED	MS	TITLE	SCALE
DE APPR.	24	CO-PILOT COLLECTIVE HEAD	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

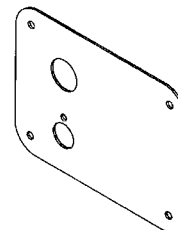
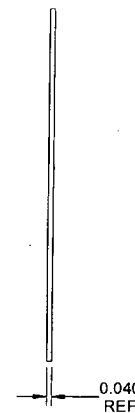
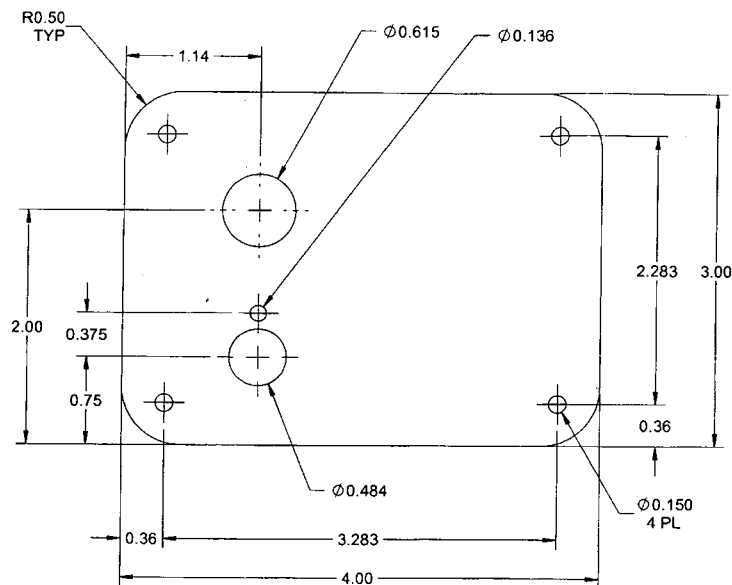
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

76531



**D4410-3 FACE PLATE**

**NOTES:**

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.040 THK  
QQ-A-250/11 OR AMS-QQ-A-250/11  
OR AMS 4025 OR AMS 4027  
OR ASTM B209  
REF. DART SPEC. M6061T6S.040
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.04 lbs

**RELEASED**  
2011-10-31  
JUN

DESIGN	DL	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	DL	KENT, WA	
CHECKED	DL	DRAWING NO.	REV. A
MFG. APPR.	DL	D4410	SHEET 4 OF 7
APPROVED	DL	TITLE	SCALE
DE APPR.	DL	CO-PILOT COLLECTIVE HEAD	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

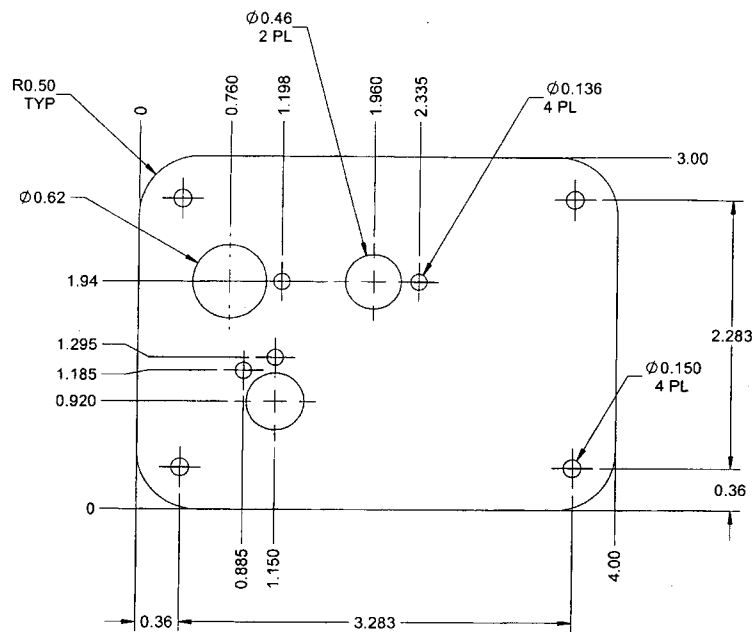
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



76531



**D4410-5 FACE PLATE**

**NOTES:**

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.040 THK  
QQ-A-250/11 OR AMS-QQ-A-250/11  
OR AMS 4025 OR AMS 4027  
OR ASTM B209  
REF. DART SPEC. M6061T6S.040
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.04 lbs

RELEASED  
2011-10-31  
JMP

DESIGN	DC	<b>DART AEROSPACE USA, INC.</b> KENT, WA	
DRAWN	DC		
CHECKED	BE	DRAWING NO.	REV. A
MFG. APPR.	ST	D4410	SHEET 5 OF 7
APPROVED	MP	TITLE	SCALE
DE APPR.	MP	CO-PILOT COLLECTIVE HEAD	NTS
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W/O:		WORK ORDER CHANGES					
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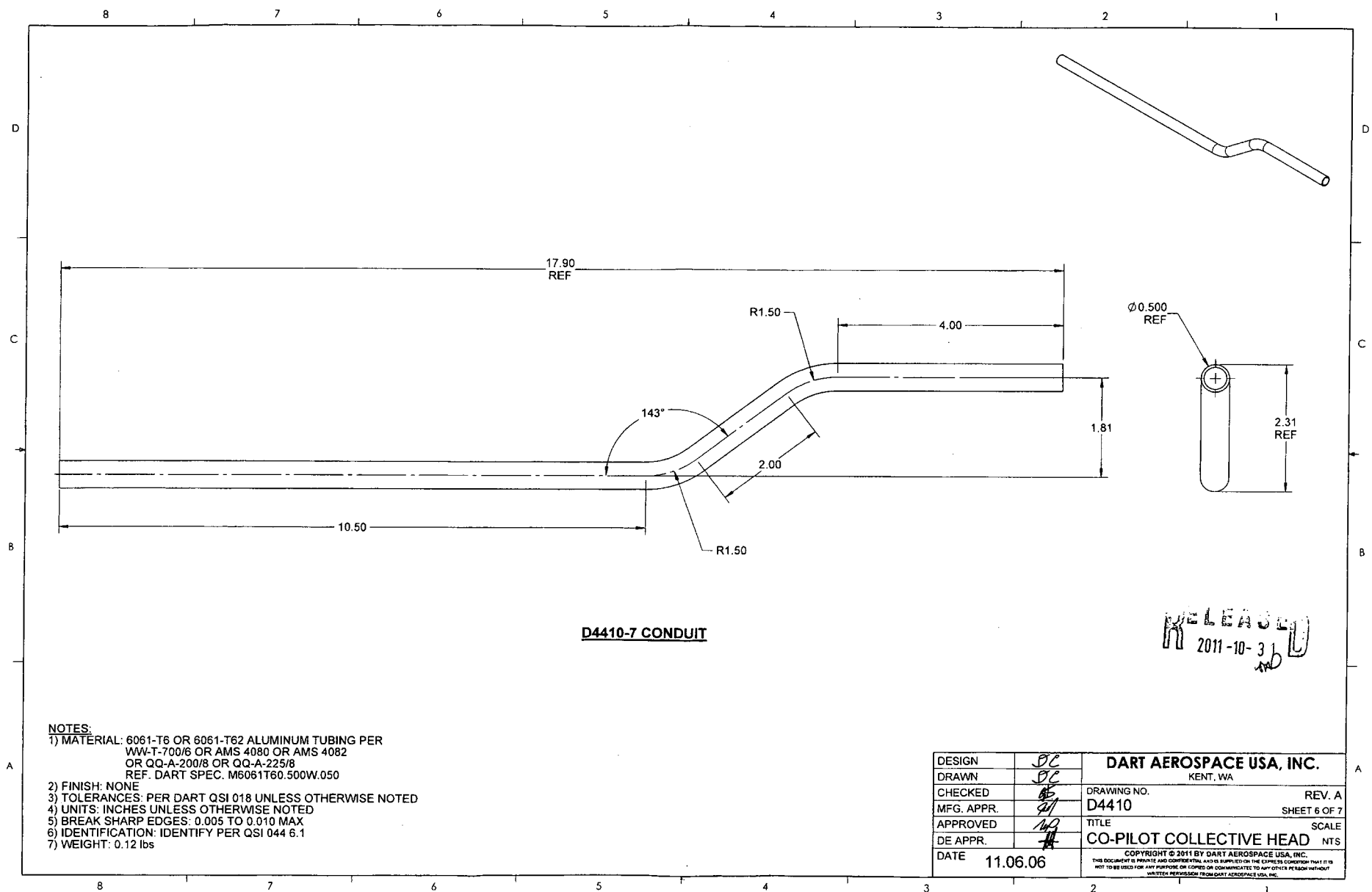
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

76531



**D4410-7 CONDUIT**

RELEASED  
2011-10-31  
APD

- NOTES:**
- 1) MATERIAL: 6061-T6 OR 6061-T62 ALUMINUM TUBING PER  
VVV-T-700/6 OR AMS 4080 OR AMS 4082  
OR QQ-A-200/8 OR QQ-A-225/8  
REF. DART SPEC. M6061T60.500W.050
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
  - 7) WEIGHT: 0.12 lbs

DESIGN	BC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	BC	KENT, WA	
CHECKED	AB	DRAWING NO.	REV. A
MFG. APPR.	SA	<b>D4410</b>	SHEET 6 OF 7
APPROVED	MA	TITLE	SCALE
DE APPR.	HA	<b>CO-PILOT COLLECTIVE HEAD</b>	NTS
DATE	11.06.06	<small>COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

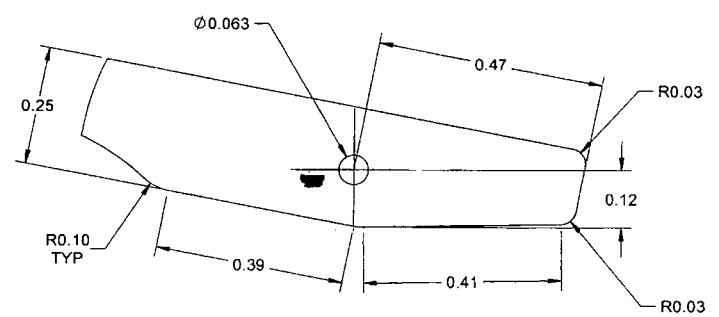
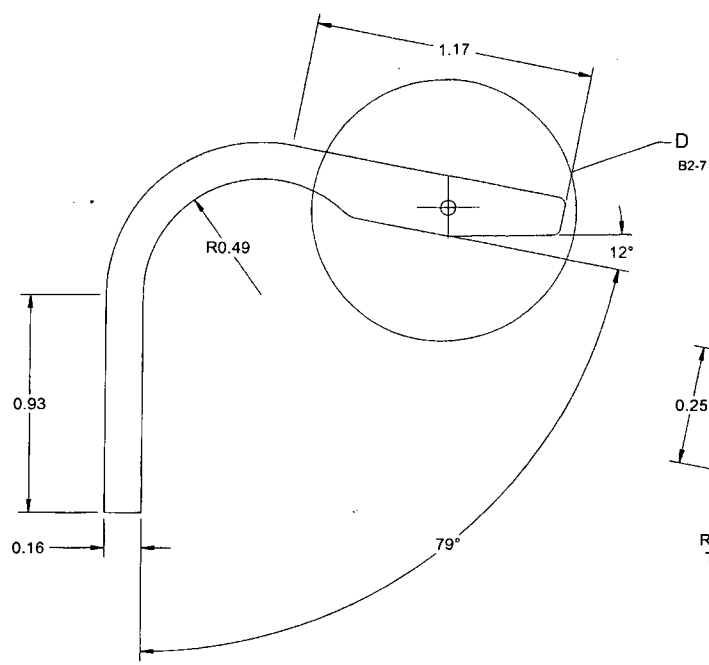
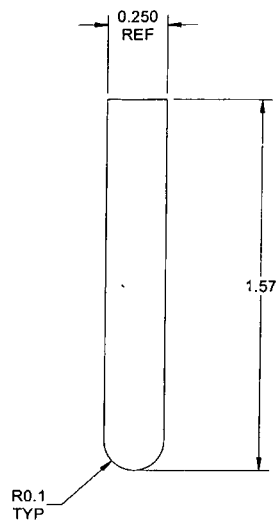
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

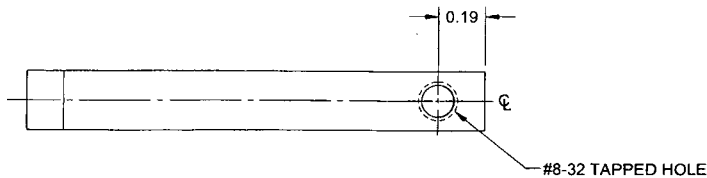
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

76531



**DETAIL D**  
**SCALE 2X**  
D4-7



**D4410-9 TRIGGER**

**NOTES:**

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.250 THK  
QQ-A-250/11 OR AMS-QQ-A-250/11  
OR AMS 4025 OR AMS 4027  
OR ASTM B209  
REF. DART SPEC. M6061T6S.250
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.01 lbs

**RELEASED**  
2011-10-30

DESIGN	DC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	DC	KENT, WA	
CHECKED	DC	DRAWING NO.	REV. A
MFG. APPR.	DC	<b>D4410</b>	SHEET 7 OF 7
APPROVED	DC	TITLE	SCALE
DE APPR.	DC	<b>CO-PILOT COLLECTIVE HEAD</b>	NTS
DATE	11.06.06	<small>COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESSED CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 76531
<b>Description:</b> Co-pilot - collector Head		<b>Part Number:</b> D4410-1
<b>Inspection Dwg:</b> D4410 <b>Rev:</b> A		<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .150	+0.005 -0.001	.149	✓		Dial Caliper	36-05
1.69	±.03	1.69	✓			
.65	±.03	.65	✓			
.36	±.03	.366	✓			
3.283	±.01	3.283	✓			
12.13	±.03	.13	✓			
.25	±.03	.252	✓			
.36	±.03	.362	✓			
3.00	±.03	3.008	✓			
2.283	±.01	2.283	✓			
.10	±.03	.105	✓			
4.00	±.03	4.005	✓			
4.80	±.03	4.792	✓			
.91	±.03	.910	✓			
Ø .116	+0.004 -0.001	.116	✓			
.35	±.03	.356	✓			
.10	±.03	.102	✓			
.15	±.03	1.501	✓			
Ø .115	+0.004 -0.001	.115	✓			
CSK Ø .188 X 100°	±.010	.190	✓			
Ø .160	+0.004 -0.001	.162	✓			
.38	±.03	.376	✓			
Ø .500	+0.005 -0.001	.500	✓			

<b>Measured by:</b> <i>SK / A</i>	<b>Audited by:</b> <i>B.A</i>	<b>Preliminary Approval:</b>
<b>Date:</b> 11/12/13	<b>Date:</b> 11/12/23	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

*10.04.15*

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 76531
<b>Description:</b> Comulat Collecting Head	<b>Part Number:</b> D4410-1
<b>Inspection Dwg:</b> D4410 <b>Rev:</b> A	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.21	$\pm .03$	2.210	✓		Dial Caliper	36 05
.82	$\pm .03$	.821	✓			
1.140	$\pm .03$	1.143	✓			
.120	$\pm .03$	.197	✓			
1.782	$\pm .01$	1.782	✓			
1.143	$\pm .01$	1.142	✓			
1.180	$\pm .01$	1.176	✓			
1.660	$\pm .01$	1.661	✓			
3.75	$\pm .03$	3.747	✓			
.43	$\pm .03$	.425	✓			
1.14	$\pm .03$	1.144	✓			
Ø .50	$\pm .006$ $-.006$	.499	✓			
12.00	$\pm .03$	.063	✓			
Ø .035	$\pm .004$ $-.001$	.037	✓			
Ø .06	$\pm .03$	.063	✓			
.13	$\pm .03$	.120	✓			
.35	$\pm .03$	.345	✓			
.57	$\pm .03$	.57	✓			
1.16	$\pm .03$	1.16	✓			
.55	$\pm .03$	.55	✓			

<b>Measured by:</b> <i>SK / AD</i>	<b>Audited by:</b>	<b>Preliminary Approval:</b>
<b>Date:</b> 11/12/13	<b>Date:</b>	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

*10.04.15*





# Receiving Report

Date: 11/11/10

Batch No: 7119581

Supplier: Jay's Tech

Dart P/O: 15376

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☐ No ☒  
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☐ No ☒ N/A ☐  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC6 Inspection S N/A ☒  
 Work Order W1110 N/A ☒

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments
BAR 3046.12564...		50	C	C	80	

Initials of receiver (if shipment OK) Level 12 [Signature]

Production/Admin: 11/11/10  
 Date [Signature]  
 Received/Costing [Signature]  
 Initial [Signature]

Location \_\_\_\_\_

INVOICE

No: PEC IV-584684,

Date: 10Nov11

Due: 10Dec11

Sold By:

THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 9057389033

Remit to:

THYSSENKRUPP MATERIALS NA  
c/o T27540  
P.O. BOX 4275, POSTAL STATION 'A'  
TORONTO, ONTARIO M5W 5V8

Sold To: ( 20115)

DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

Shipped To: ( 1)

DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

Shp Dt 10Nov11 Ord Dt 04Nov11 SO No ST-386498 B/L PEC 738240  
Trm NET 30 DAYS/NET 30 JOURS PO/Rel 15375  
Frt PREPAID Via VIM TRANSFER FOB CONCORD  
Slp STAN IVERS (905-532-1350) Pbl

1 ALUMINUM SQUARE BAR 6061-T6511	1 PCS	12 FT
4.50" X 144.0000"		285 LBS
MATERIAL	12 FT @	54.0000 FT
ENERGY & CAP SURCHG	25.0000 LOT	25.00
2 ALUMINUM FLAT BAR 6061-T6511	2 PCS	40 FT
.187" x 4.00" X 240.0000"		35 LBS
MATERIAL	40 FT @	1.9000 FT
		76.00✓

Total Shipped: 3 PCS

320

LBS

Interest will be charged at 1.5% per month or  
18% per year on overdue accounts.

\*\*\* SALES DEPT. OFFICE HOURS \*\*\*

7:30 AM TO 5:00 PM - MONDAY TO FRIDAY

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\* CUSTOMER PICK-UP HOURS \*\*\*

\*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
ADDED TO EVERY ORDER.\*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

# TPS/GST TVH/HST 140223934 RT0001

# TVQ - QST 1017327981 TQ0001

Material	Processing	Freight	Other	Taxes	TOTAL DUE
724.00			25.00	97.37	846.37✓

\*\*\*\*\*

Taxes: ONHSTS 97.37

ENTERED NOV 14 2011

Page: 1 .... Last

PAID  
DEC 07 2011

## Page 1 of 1

All amounts are calculated in domestic currency.

Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
VendorID\Vendor Name		VC-COP001	Thyssenkrupp Materials CA Ltd								
PO15375	1		M6061T6B0.187X04. f 000		11/9/2011	11/10/2011	40.0000	\$1.90	0.0000	0	\$76.00
CAD	No		6061-T6 Bar .187 x f 4.00 119581		40.0000	DESJ02		\$76.00	0.0000	0	
	2		M6061T6B4.500X4.5 f 00		11/9/2011	11/10/2011	12.0000	\$54.00	0.0000	0	\$648.00
	No		6061-T6 f AluminumBar 4.500" X 4.500" 119581		12.0000	DESJ02		\$648.00	0.0000	0	
Total Received Quantity:										52.0000	
Total Qty to Inspect (PO U/M):										0.0000	
Total Reject Quantity:										0.0000	
Total Receipt Value:										\$724.00	
Total Balance Due Quantity:										0.0000	

**B I L L O F L A D I N G**

No: PEC 738240

Ship From:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 9057389033

Ship Date 09Nov11 at 14:42 From PFW  
 Probill  
 Via VIM TRANSFER  
 FOB CONCORD  
 Frt PREPAID  
 Route 0- 0 Manifest  
 Vhcle Trailer  
 Slp STAN IVERS (905-532-1350)  
 Sold To: ( 20115)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Ship To: ( 1)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7  
 Tel: 613-632-9577 Fax: 613-632-1053

**B I L L O F L A D I N G**

1) Our Order PEC-386498- 1 Your PO # 15375  
 ALUMINUM SQUARE BAR 6061-T6511  
 4.50" X 144.0000"

**MTR**

Heat Number HK858 060	Tag No 7189	Quantity 12 FT	PCS 1	Wt LBS 285
--------------------------	----------------	-------------------	----------	---------------

2) Our Order PEC-386498- 2 Your PO # 15375  
 ALUMINUM FLAT BAR 6061-T6511  
 .187" x 4.00" X 240.0000"

**MTR**

Heat Number 201115752	Tag No 7190	Quantity 40 FT	PCS 2	Wt LBS 35
--------------------------	----------------	-------------------	----------	--------------

TOTAL:	Tags 2	PCS 3	LBS 320
--------	-----------	----------	------------

Heat Number  
201115752  
HK858 060

\*\*\* Chemical Analysis \*\*\*

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*  
 \*\* REFERENCED ON IT \*\*

TOTAL 2 BDLS G.W. 350 LBS

Page: 1 ....Continued

*2 planches*

*Lucy Bayly*

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
 RAPPORTÉES IMMÉDIATEMENT  
 ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY  
 RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT  
 MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO15375**

Purchase Order Date 11/04/11

PO Print Date 11/04/11

Page Number 1 of 2

Order From :

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Contact Name

Vendor Phone 905 669 9444

Vendor Fax 905 738 9033

Vendor Account Nbr

Buyer

Brigitte Golden

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAKED**  
*Call 11/04/11*

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6B0.187X04.000 001	6061-T6 Bar .187 x 4.00	11/09/11 Yes	✓ 40.00 f	Yours ppd <i>[Signature]</i>	\$1.9000	\$76.00
		Special Inst:	PURCH. MAT: 6061-T6- T651/T6510/T6511/T62 ALUMINUM BAR SPEC: QQ-Q-225/8 OR AMS-QQ-A-225/8 (OR AMS4117/4128/4115/4116) OR QQ-A- 200/8 OR AMS-QQ-A-200/8 (OR AMS 4161) ORASTM B211 OR ASTM B221				
2	M6061T6B4.500X4.500	6061-T6 AluminumBar 4.500" X 4.500"	11/09/11 Yes	✓ 12.00 <i>[Signature]</i>	Yours ppd <i>[Signature]</i>	\$54.0000	\$648.00
		Special Inst:	SAME AS ABOVE				
3		STAINLESS STEEL FLAT BAR 304L .125 X 4.00"	11/09/11 Yes	50.00	Yours ppd	\$55.0000	\$2,750.00
		Special Inst:	304 STAINLESS SLAT 50 PCS .125" X 4" X 12' = 600FT				

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 2

Change Date: 11/04/11



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO15375

Purchase Order Date 11/04/11

PO Print Date 11/04/11

Page Number 2 of 2

Order From :

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Contact Name		Buyer	Brigitte Golden
Vendor Phone	905 669 9444	Requisition Nbr	
Vendor Fax	905 738 9033	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

PO Total:

\$3,474.00

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

W CL

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 2

Change Date: 11/04/11



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO15375

Purchase Order Date 11/4/2011

PO Print Date 11/4/2011

Page Number 1 of 2

Order From : VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Contact Name		Buyer	Brigitte Golden
Vendor Phone	905 669 9444	Requisition Nbr	
Vendor Fax	905 738 9033	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6B0.187X04.000	6061-T6 Bar .187 x 4.00	11/9/2011 Yes	40.00 f	Yours ppd	\$1.9000	\$76.00
		Special Inst: PURCH. MAT: 6061-T6- T651/T6510/T6511/T62 ALUMINUM BAR SPEC: QQ-Q-225/8 OR AMS-QQ-A-225/8 (OR AMS4117/4128/4115/4116) OR QQ-A- 200/8 OR AMS-QQ-A-200/8 (OR AMS 4161) ORASTM B211 OR ASTM B221					
2	M6061T6B4.500X4.500	6061-T6 AluminumBar 4.500" X 4.500"	11/9/2011 Yes	12.00 f	Yours ppd	\$54.0000	\$648.00
		Special Inst: SAME AS ABOVE					
3		STAINLESS STEEL FLAT BAR 304L .125 X 4.00"	11/9/2011 Yes	1.00	Yours ppd	\$55.0000	\$55.00

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 1

Change Date: 11/4/2011





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO15375

Purchase Order Date 11/4/2011

PO Print Date 11/4/2011

Page Number 2 of 2

Order From :

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Contact Name

Vendor Phone

905 669 9444

Vendor Fax

905 738 9033

Vendor Account Nbr

Buyer

Brigitte Golden

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

4

ENERGY AND CAP  
SURCHG

11/9/2011

Yes

2.00 Yours ppd

\$25.0000

\$50.00

PO Total:

\$829.00

Change Nbr: 1

Change Date: 11/4/2011

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

# Q U O T A T I O N

No: PEC ST-385396

Quoted By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 9057389033

Quoted To: ( 20115)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Quoted Ship To: ( 1)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Trm NET 30 DAYS/NET 30 JOURS Qtd 02Nov11 Qte Ref  
 Frt PREPAID Via FOB  
 Tel 613-632-9577 Fax 613-632-1053 Ctc 96294  
 Slp STAN IVERS (905-532-1350)

Q U O T A T I O N QT No: PEC ST-385396  
 Test Certs: Chem-Y Phys-Y 1 Original copies with Shipment, 1 with Invoice

1 ALUMINUM FLAT BAR 6061-T6511 .187" x 4.00" X 240.0000" MATERIAL ENERGY & CAP SURCHG	2 PCS 40 FT @ 1.9000 FT 25.0000 LOT	36 LBS 40 FT 76.00 25.00
2 ALUMINUM TUBE 6061T6 DRAWN 1.75" OD X .049" WALL X 144.0000" Part No 4-6 DAYS A.R.O OFFERING MATERIAL	25 PCS 300 FT @ 1.8000 FT	18 LBS 300 FT 540.00
3 STAINLESS STEEL FLAT BAR 304L SLIT/EDGED .125" X 4.00" X 144.0000" Part No 4-6 DAYS A.R.O MATERIAL	1 PCS 1 PCS @ 55.0000 EA	21 LBS 55.00

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*  
 \*\* REFERENCED ON IT \*\*

Price in effect at time of shipment.  
 Price based on receipt of total order.

All weights are theoretical.  
 All orders are subject to credit approval.

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\* CUSTOMER PICK-UP HOURS \*\*\*

\*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*  
 \* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE

Q U O T A T I O N

No: PEC ST-385678

Quoted By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 9057389033

Quoted To: ( 20115)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Quoted Ship To: ( 1)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Trm NET 30 DAYS/NET 30 JOURS Qtd 03Nov11 Qte Ref  
 Frt PREPAID Via FOB  
 Tel 613-632-9577 Fax 613-632-1053 Ctc CHANTAL  
 Slp STAN IVERS (905-532-1350)

Q U O T A T I O N

QT No: PEC ST-385678

Test Certs: Chem-Y Phys-Y 1 Original copies with Shipment, 1 with Invoice

1 ALUMINUM SQUARE BAR 6061-T6511	1 PCS	288 LBS
4.50" X 144.0000" <i>4.50</i>		12 FT
MATERIAL	12 FT @ 54.0000 FT	648.00
ENERGY & CAP SURCHG	25.0000 LOT	25.00

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*

\*\* REFERENCED ON IT \*\*

Price in effect at time of shipment.

Price based on receipt of total order.

All weights are theoretical.

All orders are subject to credit approval.

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\* CUSTOMER PICK-UP HOURS \*\*\*

\*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
 ADDED TO EVERY ORDER.\*\*\*

Order Totals: 1 Items 288 LBS

*****	Material	Processing	Freight	Other	Taxes	ORDER AMT
	648.00			25.00	87.49	760.49
*****	Taxes: ONHSTS	87.49	0.00	0.00	0.00	

11/04/11  
02:53 PM EDT

**STELfax**

**From:** THYSSENKRUPP MATERIALS NA  
STAN IVERS  
Tel: 905 669 9444  
Fax: 9057389033

**To:** DART AEROSPACE  
Attn: 96294  
Tel: 613-632-9577  
Fax: 613-632-1053  
Number of Pages: 2

**Subject:** Sales Acknowledgement

---

04Nov11 14:52

## S A L E S A C K N O W L E D G M E N T

No: PEC ST-386498

Sold By:

THYSSENKRUPP MATERIALS NA

2821 LANGSTAFF ROAD

CONCORD, ONTARIO L4K 5C6

Tel: 905 669 9444 Fax: 9057389033

Sold To: ( 20115)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Ship To: ( 1)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Trm NET 30 DAYS/NET 30 JOURS  
 Frt PREPAID  
 Con 96294  
 Slp STAN IVERS (905-532-1350)

Ord 04Nov11 Due09Nov11  
 Via VIM TRANSFER  
 PO/Rel 15375  
 Tel 613-632-9577 Fax 613-632-1053

FOB CONCORD

S A L E S A C K N O W L E D G M E N T SO No PEC ST-386498  
 Test Certs: Chem Y Phys Y 1 Original copies with Shipment, 1 with Invoice

1 ALUMINUM SQUARE BAR 6061-T6511	1 PCS	288 LBS
4.50" X 144.0000"		12 FT
MATERIAL	12 FT @	54.0000 FT
ENERGY & CAP SURCHG	25.0000 LOT	648.00
		25.00
2 ALUMINUM FLAT BAR 6061-T6511	2 PCS	36 LBS
.187" x 4.00" X 240.0000"		40 FT
MATERIAL	40 FT @	1.9000 FT
		76.00

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*

\*\* REFERENCED ON IT \*\*

\*\* CUSTOMER PICK-UP HRS / 9:00 AM TO 4:00 PM \*\*

\*\*\* TEL. 800-926-2600 \*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
 ADDED TO EVERY ORDER. \*\*\*

Order Totals:		2 Items	324 LBS
Material	Processing	Freight	Other
724.00			25.00
Taxes		ORDER AMT	
97.37		846.37	
Taxes: QNHSTS 97.37			

11/04/11  
02:56 PM EDT

# STELfax

**From:** THYSSENKRUPP MATERIALS NA  
STAN IVERS  
Tel: 905 669 9444  
Fax: 905 738 9033

**To:** DART AEROSPACE  
Attn: 96294  
Tel: 613-632-9577  
Fax: 613-632-1053  
Number of Pages: 2

**Subject:** Sales Acknowledgement

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04Nov11 14:54      S A L E S   A C K N O W L E D G M E N T      No: PEC ST-386501

Sold By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 9057389033

Sold To:    ( 20115)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Ship To:    ( 1)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Trm NET 30 DAYS/NET 30 JOURS      Ord 04Nov11 Due09Nov11  
 Frt PREPAID      Via VIM TRANSFER      FOB CONCORD  
 Con 96294      PO/Re1 15375  
 Slp STAN IVERS (905-532-1350)      Tel 613-632-9577 Fax 613-632-1053

===== S A L E S   A C K N O W L E D G M E N T      SO No PEC ST-386501  
 Test Certs: Chem Y Phys Y    1 Original copies with Shipment, 1 with Invoice

1 STAINLESS STEEL FLAT BAR 304L SLIT/EDGED	50 PCS	1,026 LBS
.125" X 4.00" X 144.0000"		600 FT
MATERIAL	600 FT @ 4.3500 FT	2,610.00

\*\*\*\*\*SHIP WITH 386498\*\*\*\*\*

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*

\*\* REFERENCED ON IT \*\*

\*\* CUSTOMER PICK-UP HRS / 9:00 AM TO 4:00 PM \*\*

\*\*\* TEL. 800-926-2600 \*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
 ADDED TO EVERY ORDER.\*\*\*

Order Totals:				1 Items	1,026 LBS
*****					
Material	Processing	Freight	Other	Taxes	ORDER AMT
2,610.00				339.30	2,949.30
*****					
Taxes: ONHSTS		339.30			

## B I L L O F L A D I N G

No: PEC 738240

Ship From:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 9057389033

Ship Date 09Nov11 at 14:42 From PFW  
Probill  
Via VIM TRANSFER  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: ( 20115)  
DART AEROSPACE

Ship To: ( 1)  
DART AEROSPACE

## B I L L O F L A D I N G

\*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA  
CONCORD, ONT.\* \*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
ADDED TO EVERY ORDER.\*\*\*

Page: 2 .... Last

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMÉRO D'APPROBATION SEULEMENT.

MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.



# B I L L O F L A D I N G

No: PEC 738240

Ship From:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 9057389033

Ship Date 09Nov11 at 14:42 From PFW  
Probill  
Via VIM TRANSFER  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: ( 20115)  
DART AEROSPACE

Ship To: ( 1)  
DART AEROSPACE

## B I L L O F L A D I N G

\*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA  
CONCORD, ONT.\* \*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
ADDED TO EVERY ORDER.\*\*\*

Page: 2 .... Last

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY.

RETOUR DE MARCHANDISES AVEC NOTRE NUMÉRO D'APPROBATION SEULEMENT.

MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

REÇU EN BONNE CONDITIONS / RECEIVED IN GOOD CONDITION

TVQ/QST# 1017327981 TQ001 TPS/GST TVH/HST # 140223034 RT0001

DATE

# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

ALUMINUM SQUARE BAR 6061-T6511

4.50" X 144.0000"

PART NO.

PO/Ref: 15375

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

## Certificate of Mill Test Results

BL PEC-738240-001

90Nov11

Signed by:

Pg 1/1

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
5205 KAISER DRIVE  
KALAMAZOO, MI 49048

### CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

CUSTOMER PO NUMBER: PEC-233453-2		CUSTOMER PART NUMBER: ALSQ00052		PRODUCT DESCRIPTION: 4.500 SQ SQ BAR	
KAISER ORDER NUMBER: 604628	LINE ITEM: 002	SHIP DATE: 09/30/2011	KAISER LOT NUMBER: HK858 060	ALLOY: 6061	TEMPER: T6511
WEIGHT SHIPPED: 1143.000 LB	QUANTITY: 4.000 PCS	B/L NUMBER: 601535	DIAM/DAF/THKNS: 4.500/4.500/0.1875	WIDTH: 144.000	LENGTH: 12.000 FT
SHIP TO:  THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD CONCORD, ON L4K 5C6 CANADA			SOLD TO:  THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD CONCORD, ON L4K 5C6 CANADA		

### Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
XTR002C57	0001	C001	55.6	50.8	17.1	RE 96	N/A	N/A

### Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.10	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
A31243	.75	.34	.22	.05	.96	.12	.03	.02	.00	.00	.00	.00	.01

### Applicable Requirements:

ASTM-B221-08-STENCILED ASME-SB221 1998 SECT II AMS-QQ-A-200/8 UNS#96061 (T6511 also conforms to T6-not applicable to other tempers)

### Miscellaneous Notes

MANUFACTURED IN USA (PLAINFIELD, IL) MELTED IN USA

### CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Alex Yeh, Quality & Technology Manager

Plant Serial: 00009497

Kaiser Order Number: 604628

Line Item: 002

DART AEROSPACE  
ALUMINUM PLAT BAR 6061-T6511  
187" x 4.00" X 240.0000"  
PART NO.

PO/Ref: 15375

We certify that this is a true copy of the report  
furnished by the producer of the metal, or data  
resulting from tests made in approved labs.

BL PEC-738240-002

2 Nov 11

Pg 1/1



**SERVICE CENTER METALS**  
5850 Quality Way  
Prince George, VA 23875

### CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

BILL TO

ThyssenKrupp Materials NA

SHIP TO

ThyssenKrupp Materials NA PEC

Quantity Certified 1,202 lbs 68 pcs

MANIFEST NUMBER

142450

CUSTOMER PO

PEC-233677

CUSTOMER PART NUMBER

RB0545 X 240

DIE NUMBER

RB0545

ALLOY / TEMPER

6061-T6511

DESCRIPTION

SCRB .188x4.000

DATE OF SHIPMENT

10/14/2011

SALESPERSON

David Schroeder

OUR ORDER NUMBER

136819

ITEM

1

CERTIFICATION

ASTM-B221-08 StencilContinuous

SPECIFICATION

AMS-QQA-200/8

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA from ingot melted and cast in the United States or Canada.

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

#### Mechanical Properties

Tests

Lot No.

1 201115752

2 201115752

Test Date

10/13/11

10/13/11

Ultimate Tensile  
Strength (KSI)

46.3

45.6

Yield Strength  
(KSI)

43.6

43.0

Percent  
Elongation

12.0

11.0

*Calvin*

#### Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Total	Melted In Canada
2BP937-270	6061	0.66	0.16	0.30	0.09	0.87	0.09	0.01	0.01	0.05	0.15	

Print Date: 10/14/2011

*Calvin J. Wiggins*  
Calvin J. Wiggins, Director of Quality & Technical Services

Rev. 9/23/11 - UMS